

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A data storage system, comprising:

a first disk drive unit;

a second disk drive unit, coupled to the first disk drive unit by a bus;

a main cache memory, coupled to the bus, that caches data from both the first disk drive unit and the second disk drive unit; and

D1
a secondary memory separate from the main cache memory and provided as part of the first disk drive unit, wherein the secondary memory has at least two sections, a first section used by the first disk drive unit to facilitate disk accesses and a second section used to cache data provided to the second section from the second disk drive unit while said main cache memory caches data from both the first disk drive unit and the second disk drive unit, wherein data cached to the secondary memory is different from data cached to the main cache memory.

2. Cancelled

3. (Currently Amended) A data storage device comprising:

a first section of onboard volatile memory containing data for the storage device;

an interface for communicating data from the data storage device to a main cache memory, wherein the main cache memory contains data from at least one other data storage device and wherein the main cache memory is separate from the data storage device and the at least one other data storage device; and

a second section of onboard volatile memory associated with the data storage device and used as a cache including data cached from the at least one other data storage device, wherein the second section of onboard volatile memory is provided with data from the at least one other data storage device and wherein data cached to the onboard volatile memory is different from data cached to the main cache memory.

4. (Previously Presented) The data storage device of Claim 3, wherein the data storage device is a first disk drive unit.

5. (Previously Presented) The data storage device of Claim 4, wherein said first section of onboard volatile memory includes data cached from said first disk drive unit.

6. (Original) The data storage device of Claim 3, further comprising:

an interface that provides and accepts data;

a disk platter that stores data; and

a controller that handles communication between said interface and said disk platter, wherein said onboard volatile memory is part of said controller.

7. (Previously Presented) The data storage device of Claim 6, further comprising:

a processor of said data storage device; and

an other section of onboard volatile memory associated with the said data storage device in which said processor uses said other section of onboard volatile memory in connection with accessing data stored on said disk platter.

8. (Currently Amended) A data storage system comprising:

a first disk drive including a section of onboard memory associated with the first disk drive and including an interface that handles data communication to and from the first disk drive;

a second disk drive that provides data to the first disk drive via the interface;

a main cache memory that caches data from both the first and second disk drives, said main cache memory being separate from the first and second disk drives and said onboard memory; and

memory that caches data of the data storage system, said memory including said section of onboard memory associated with said first disk drive wherein said section includes a portion of data cached from at least said second disk drive, ~~and wherein data~~ from said second disk drive is provided to the onboard memory, and wherein data cached to the onboard memory is different from data cached to the main cache memory.

9. (Original) The data storage system of Claim 8, wherein said section of onboard memory includes a portion of data that is not duplicated elsewhere in said data storage system.

10. (Original) The data storage system of Claim 8, wherein said section of onboard memory includes a portion of data that is duplicated elsewhere in said data storage system.

11. (Original) The data storage system of Claim 10, wherein said memory for caching includes a portion of system memory of said data storage system.

12.(Original) The data storage system of Claim 11, further comprising:

a command generator that generates at least one command for performing a data operation in connection with caching data of said system memory and at least one command for performing a data operation in connection with caching data of said section of onboard memory.

13. (Original) The data storage system of Claim 11, further comprising:

a first command generator that generates at least one command for performing a data operation in connection with caching data of said system memory; and

a second command generator different from said first command generator that generates at least one command for performing a data operation in connection with caching data of said section of onboard memory.

14. (Original) The data storage system of Claim 8, further comprising:

a command generator that generates at least one command for performing a data operation in connection with data caching of said section of onboard memory.

15. (Original) The data storage system of Claim 14, further comprising:

a host interface unit that includes said command generator, said host interface unit being connected to a host computer system.

16. (Original) The data storage system of Claim 14, further comprising:

a disk interface unit for interfacing with said first disk drive.

17. (Original) The data storage system of Claim 14, wherein said command generator executes on a dedicated computer processor.

18. (Original) The data storage system of Claim 14, further comprising:

system cache memory included in a system memory associated with said data storage system, wherein said command generator generates commands for performing a data operation in connection with caching data to said system cache memory.

19. (Previously Presented) The data storage system of Claim 18, further comprising:

a command interpreter that interprets commands in connection with a data caching operation of at least one of said section of onboard memory and said system cache memory.

20.-31 (Cancelled)
